REMARKS

Claims 1-23 are pending in this application. Claims 1, 3, 11, and 12 have been amended to define still more clearly what Applicant regards as his invention. Claims 1, 11-13, 22, and 23 are independent.

Applicant notes with appreciation the allowance of Claims 13-23.

Claims 1-3, 5, 6, and 9-12 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,426,463 to Reininger et al. Claims 4 and 7 were rejected under 35 U.S.C. § 103(a) as being obvious from Reininger et al. in view of U.S. Patent 6,111,609 to Stevens; and Claim 8, as being obvious from Reinenger et al. in view of U.S. Patent 5,608,654 to Matsunoshita.

The present invention is directed to improvements in encoding techniques which, as explained in more detail in the present application, encode, for example, a digital motion image input from a camera. In such encoding, problems can arise in the length of time required to encode the image, or in the quality of the image (for example, if non-uniform frames are generated).

Claim 1 is directed to an image encoding apparatus, comprising input means, control means, storage means, selecting means, and encoding means. The input means inputs motion-image data, and the control means outputs an encoding parameter such that an amount of code provided when the input motion-image data is encoded in units of predetermined sizes is a predetermined amount of code. The storage means stores an encoding parameter. The selecting means selects the encoding parameter output from the control means or the encoding parameter stored in the storage means. The encoding means encodes the input motion-image data by the selected encoding parameter.

One important feature of Claim 1 is selecting either the output encoding parameter or the encoding parameter stored in a storage means, and encoding motion-image data by the selected encoding parameter.

Reininger et al., as understood by Applicant, relates to an apparatus for controlling quantizing in a video signal compressor. A rate controlled VBR quantizing system includes a quantizer for quantizing partially compressed video data and an apparatus for monitoring the amount of compressed output data. Depending upon the amount of compressed output data being lesser to or greater than a predetermined value, the quantizer is conditioned to operate in a fixed quantization mode, or in a mode wherein only selected blocks of data in respective frames are adaptively quantized, respectively.

Although Reininger et al. discusses inputting motion-image data and controlling quantizing in a video signal compressor, Applicant has found nothing in that patent that would teach or suggest outputting an encoding parameter such than an amount of code provided when the input motion-image data is encoded in units of predetermined sizes is a predetermined amount of code, storing an encoding parameter, selecting the output encoding parameter or the encoding parameter stored in the storage means, and encoding the input motion-image data by the selected encoding parameter, as recited in Claim 1. By virtue of these features, it is possible to encode a motion image in real time with the most suitable number of codes which produce a uniform image quality.

For at least these reasons, Claim 1 is believed to be clearly allowable over Reininger et al.

Independent Claims 11 and 12 method and storage medium claims, respectively, corresponding to Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

A review of the other art of record has failed to reveal anything which, in Applicant's opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

This Amendment After Final Action is believed clearly to place this application in condition for allowance and its entry is therefore believed proper under 37 C.F.R. § 1.116. Accordingly, entry of this Amendment After Final Action, as an earnest effort to advance prosecution and reduce the number of issues, is respectfully requested. Should the Examiner believe that issues remain outstanding, the Examiner is respectfully requested to contact Applicant's undersigned attorney in an effort to resolve such issues and advance the case to issue.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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